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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,982	03/12/2001	Stefan Karl	1200.473	6932
7590 01/21/2005				
Liniak, Berenato, Longacre & White 6550 Rock Spring Drive, Ste. 240 Bethesda, MD 20817			EXAMINER FORD, JOHN K	
			ART UNIT 3753	PAPER NUMBER

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,982

Applicant(s)

KARL, STEFAN

Examiner

John K. Ford

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/5/04
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 8-23 is/are pending in the application.
- 4a) Of the above claim(s) 3, 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8-15 and 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Applicant's response of November 5, 2004 has been carefully studied. Claims 3 and 16 have been designated as not readable on the elected species of Figure 3. Claims 4-7 have been canceled. Accordingly claims 1, 2, 8-15 and 17-23 are examined here. Independent claim 1 has been amended to delete the valving system for the engine coolant fluid. According it is rejected here on the same grounds as previous applied, JP 10-76837 in view of Enomoto, Figure 8 and the description thereof.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12, 15 and 17-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. To the extent that all of these claims can be read to claim some automatic control system of these valves to produce some intended effect on compressor pressure, there simply is no support in the original specification for any type of automatic control.

No automatic control is disclosed to ensure that this control will occur. Consistent with MPEP 2114, the manner of operating the device does not differentiate an apparatus claim from the prior art. Ex parte Masham, 2 USPQ2s 1647 (BPAI 1987). Regarding the fact that references that show bypasses do not explicitly appear to teach that these bypasses regulate compressor inlet pressure, it is old and well settled law that the motivation of combining references need not be

for the same reason as applicant has identified. In re Lintner, 173 USPQ 560 (CCPA 1972) or In re Dillon 16 USPQ2d 1987 (Fed. Cir. 1991).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 8, 9, 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 11 it is unclear which of the two claimed evaporators or two claimed condensers of claim 1, applicant is referring to. Make it clear.

Claims 8 and 9 recite an accumulator that doesn't appear to exist in elected Figure 3. Either explain where it is or designate these claims as non-elected in response to this action or amend the claims to describe structure shown in elected Figure 3.

Claim 12 is very vague. A host of not previously claimed or not well-defined structure is found in the second paragraph of that claim including: "first valve system," and the "second valve system." Moreover, the anti-return valve is not upstream of the evaporator, is it?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

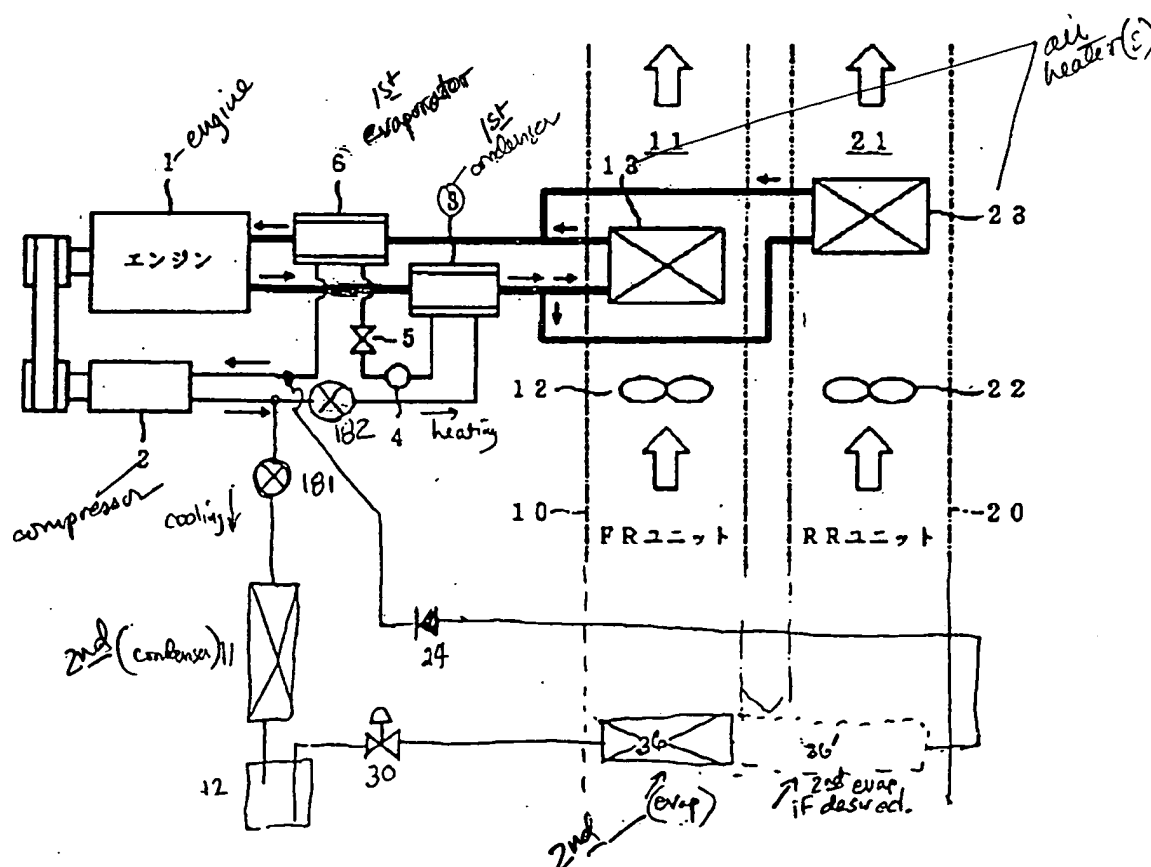
Claims 1, 2, 10, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of JP 10-76837 and Enomoto, Figure 8, and the description thereof.

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JA '837 shows a refrigerant system for beneficially increasing the heating effect of a liquid based heating system. It has no ability to cool the compartment in hot weather. The compressor 2 is known to be the most costly component of automotive air conditioning systems.

Enomoto teaches in Figure 8 a refrigerant based heater circuit (182, 13, 37, 15) and a refrigerant based cooler circuit (181, 11, 12, 30, 36 and 24) connected in parallel across the output and inputs of the compressor 10.

To have added a refrigerant based cooler circuit (as described above) to JA '837 to give the capability of cooling in the summer as well as heating in the winter would have been obvious to one of ordinary skill in climates where air conditioning was needed to preserve occupant comfort. Appropriate valves (181, 182) on the discharge side of the compressor would be necessary to separately activate the heating and cooling systems. The modification is shown below:



Regarding claim 10, see element 24 in the sketch. Regarding claim 11, see elements 5 and 30. Regarding claims 13 and 14, not Enomoto shows an internal combustion engine and discloses as a substitute an electric motor (col.5, last line).

To have used the JA '837/Enomoto system in an electric car or gasoline powered car would have been obvious given the general acceptance of both by the general public.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Echigoya et al.

To have used a conventional suction-line accumulator such as disclosed by Echigoya at 66 in the prior art to prevent the compressor from ingesting liquid refrigerant and then breaking would have been obvious to one of ordinary skill in the art.

Claims 12, 15, 17, 18, 19, 20, 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of Whalen or Momose (JP 5-24134) or FR 2288278.

Whalen teaches bypasses 64 and 66 around a chiller 10 and heater 12 controlled by valves 58 and 56. Similarly Momose Fig. 1 shows a heat pump circuit (1, 2, 3 and 4) and external fluid bypasses in loops 6 and 9. FR '278 (at 9 and 14 with valves 4 and 15, respectively) teaches similar bypasses of the externally circulated fluid.

In Whalen, Momose and FR '278, the bypasses of the external fluids permit more accurate control of its temperature. To have added such coolant bypasses around heat exchangers 6 and 3 of JP 10-76837/Enomoto to permit accurate control of fluid (coolant) temperatures in the coolant loop (i.e. to prevent the engine coolant from getting too cold or too hot) would have been obvious to one of ordinary skill.

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Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of JP 63-207,709.

JP '709 teaches air evaporator fluid bypass valve 13, controlling flow to heat exchanger 12 and water valve at 11. To have modified the prior art with such control valves 11 and 13 and a heat exchanger 12 would have been obvious to permit improved control.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of JP 11-34640.

JP '640 shows a condenser bypass conduit 47 and a control valve 45 to introduce engine coolant fluid into the condenser heat exchanger 31. To have added such valves and bypasses to the prior art (and, if necessary, outside heat exchanger 42 as shown in JP '640) would have been obvious to more adequately control the heating and to get rid of excess heat.

Claims 12 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 15 above, and further in view of JP 11-34640.

JP '640 shows a condenser bypass conduit 47 and a control valve 45 to introduce engine coolant fluid into the condenser heat exchanger 31. To have added such valves and bypasses to the prior art (and, if necessary, outside heat exchanger 42 as shown in JP '640) would have been obvious to more adequately control the heating and to get rid of excess heat.


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number (571) 272-4911.



John K. Ford
Primary Examiner